

# Water for life and livelihoods



## River basin management plans

## Glossary

We are the Environment Agency. We protect and improve the environment and make it a better place for people and wildlife.

We operate at the place where environmental change has its greatest impact on people's lives. We reduce the risks to people and properties from flooding; make sure there is enough water for people and wildlife; protect and improve air, land and water quality and apply the environmental standards within which industry can operate.

Acting to reduce climate change and helping people and wildlife adapt to its consequences are at the heart of all that we do.

We cannot do this alone. We work closely with a wide range of partners including government, business, local councils, other agencies, civil society groups and the communities we serve.

Front Cover: Derwent Water. Late Autumn Sun. Dave Martin 2013 ©

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Further copies of this report are available  
on the [river basin management plan web pages](http://www.gov.uk/government/collections/river-basin-management-plans-2015)  
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If this document doesn't provide the definition or explanation of an acronym that you require, please let us know.

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This document will be updated with suitable additions that are requested.

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## 2. Introduction

The river basin management plans consist of many individual documents, maps and datasets as well as linking to other related content held by other organisations. Plain English has been used where possible to make them widely accessible. Due to the technical nature of some of the content of the plans, supporting documents and data visualisations, technical terminology is often used.

This document has been produced as a reference guide for those reading the river basin management plan documents, providing an explanation of technical terms and expansion of the acronyms commonly used throughout the documentation.

Part 2 the 'river basin management planning process and additional information' contains more detail on a lot of the terms described in this document. It is available on the river basin management plan web pages:

<https://www.gov.uk/government/collections/river-basin-management-plans-2015>

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### 3. Technical terms

Term	Explanation
<b>Agri-environment scheme</b>	Land management scheme that provides funding to farmers and other land managers in England to deliver effective environmental management on their land.
<b>Alien species</b>	See invasive non-native species.
<b>Alternative objectives</b>	In certain and specific circumstances (set out in Article 4.4 and 4.5 of the Water Framework Directive) member states may deviate from achieving the default objectives of the Water Framework Directive. Objectives which are different from the default objectives are referred to as alternative objectives.
<b>Angiosperms</b>	The flowering plants. In transitional and coastal waters they include sea grasses and the flowering plants found in salt marshes.
<b>Aquifer</b>	A subsurface layer or layers of rock or other geological strata of sufficient porosity and permeability to allow either a significant flow of groundwater or the abstraction of significant quantities of groundwater.
<b>Article 4.7</b>	Article 4.7 of the Water Framework Directive is a defence to breaches of the Directive's objectives and sets out certain and specific conditions which must apply before a new modification to physical characteristics of a surface water body or alteration to levels of groundwater body are allowed that could result in deterioration of water body status or failure to achieve good status.
<b>Artificial water body</b>	A man-made water body, rather than a modified natural water body, which supports important aquatic ecosystems. It includes canals, some docks and some man-made reservoirs.
<b>Asset management plan</b>	See 'price review'.
<b>Bathing waters</b>	Bathing waters are beaches, lakes or ponds that are used by a large number of bathers and have been designated under the <a href="#">Bathing Water Directive</a> .
<b>Bathing waters directive</b>	Areas where water quality is preserved, protected and improved, under European Directive 2006/7/EC, to protect the health of bathers. (Also, see 'protected areas')
<b>Benefits</b>	In the context of river basin management planning economic appraisal, a benefit is any additional value to people, the environment or the economy which arises from action to improve the water environment. For example, improving the water quality and flow in a river may result in the fish population improving so that the river can be used for angling and thus deliver recreational benefits.



<b>Biodiversity action plan</b>	National, local and sector-specific plans established under the United Kingdom Biodiversity Action Plan, with the intention of securing the conservation and sustainable use of biodiversity.
<b>Biological element</b>	A collective term for a particular characteristic group of animals or plants present in an aquatic ecosystem (for example: phytoplankton, benthic invertebrates, phytobenthos, macrophytes, macroalgae, angiosperms or fish).
<b>Biological indicators</b>	A parameter that can be monitored to estimate the value of a biological quality element. Indicators may include the presence or absence of a particularly sensitive species.
<b>Biological quality element</b>	A characteristic or property of a biological element that is specifically listed in Annex V of the Water Framework Directive for the definition of the ecological status of a water body (for example composition of invertebrates, abundance of angiosperms or the age structure of fish).
<b>Catchment</b>	The area from which precipitation contributes to the flow from a borehole spring, river or lake. For rivers and lakes this includes tributaries and the areas they drain. In river basin management this can refer to the larger management catchments and the smaller operational catchments.
<b>Catchment based approach (CaBA)</b>	Taking a catchment based approach helps to bridge the gap between strategic management planning at a river basin district level and activity at the local water body scale. The catchment based approach aims to encourage groups to work together more effectively to deal with environmental problems locally.
<b>Catchment data explorer</b>	The catchment data explorer is a web application to help explore and obtain detailed information about local catchments and individual bodies of water. <a href="http://environment.data.gov.uk/catchment-planning/">http://environment.data.gov.uk/catchment-planning/</a>
<b>Catchment modelling techniques</b>	Methods used to describe and/or predict characteristics of a catchment. Traditionally, these have focused on natural processes or movement of pollutants but they can also include other factors such as demographic, social and economic characteristics.
<b>Challenges and choices consultation</b>	The challenges and choices consultation is run prior to the consultation on the draft update to the river basin management plans. This consultation looks specifically at the significant water management issues (SWMIs) for each river basin district. See 'Summary of significant water management issues' (the title of the same consultation leading up to the first river basin management plans).
<b>Characterisation (of water bodies)</b>	A two-stage assessment of water bodies under the Water Framework Directive. Stage 1 identifies water bodies and describes their natural characteristics. Stage 2 assesses the pressures and impacts from human activities on the water environment. The assessment identifies those water bodies that are at risk of not achieving the environmental objectives set out in the Water Framework Directive. The results are used to prioritise both environmental monitoring and further

	investigations to identify those water bodies where improvement action is required.
<b>Chemical status</b>	<p>The classification for surface water bodies against the environmental standards for chemicals that are identified as priority substances or priority hazardous substances. Chemical status is recorded as good or fail. A status of good means that concentrations of priority substances and priority hazardous substances do not exceed the environmental quality standards in the Environmental Quality Standards Directive. The chemical status classification for the water body, and the confidence in this (high or low), is determined by the worst test result.</p> <p>Chemical status and ecological status together define the overall surface water status of a water body.</p> <p>For groundwater see "Groundwater chemical status".</p>
<b>Classification</b>	Method for distinguishing the environmental condition or "status" of water bodies.
<b>Coastal/Estuary forums &amp; Partnerships</b>	Organisations formed to facilitate the integration and management of actions and activities in estuaries and at the coast. They are uniquely placed to provide relevant expertise and a range of key services to coastal stakeholders.
<b>Common agricultural policy (CAP)</b>	The <a href="#">EU's Common Agricultural Policy (CAP)</a> is the system of agricultural subsidies and programmes. It covers farming, environmental measures and rural development, and controls EU agricultural markets. It is the EU's single largest common policy and accounts for over 40% of the entire EU budget.
<b>Common implementation strategy</b>	This strategy was agreed by the European Commission, Member States and Norway in 2001. The aim of the strategy is to provide support in the implementation of the Water Framework Directive, by developing a common understanding and guidance on key elements of the Directive.
<b>Competent authority</b>	An authority or authorities identified under Article 3(2) or 3(3) of the Water Framework Directive. The competent authority will be responsible for implementing the requirements of the Directive within each river basin district lying within its territory. The Environment Agency is the competent authority for the 7 river basin districts wholly in England. The Environment Agency and NRW jointly manage the Severn and Dee river basin districts. The Scottish Environment Protection Agency (SEPA) and the Environment Agency jointly manage the Solway Tweed river basin district.
<b>Confident measures</b>	A measures is referred to as a 'confident measure' where there is at least a reasonable expectation that a measure will take place, where it will take place and which water bodies will be protected or improved by it. Confident measures are used in the process to set water body objectives.
<b>Cost effective</b>	In the context of river basin management planning, it describes the least cost option for meeting an objective. For example, where there are a number of potential actions that could be implemented to achieve good status for a water body, the option that delivers the objective for the least overall cost is the most cost effective option.

	Cost effectiveness analysis can be used to compare each option and identify the most cost effective one but ultimately cannot assess whether an option is economically justified
<b>Cross compliance</b>	A form of conditionality by which, farmers in receipt of the Basic Payment through the Common Agricultural Policy are required to comply with European Union environmental legislation, called Statutory Management Requirements. For example, the Nitrates Directive set standards for maintaining land and the environment, called 'Good Agricultural and Environmental Conditions' (GAECs), this includes providing minimum soil cover and buffer strips next to watercourses.
<b>Countryside Stewardship</b>	Countryside Stewardship is a scheme that is open to all eligible farmers, woodland owners, foresters and other land managers through a competitive application process. It is entirely voluntary and is part of a wider investment of £3.5 billion in England under the Common Agricultural Policy for 2016 to 2020.
<b>Delineation (of water bodies)</b>	Identifying the type and defining the boundary of a water body for rivers, lakes, estuaries, coastal waters and groundwater under the Water Framework Directive.
<b>Designated use</b>	Under the Water Framework Directive, water bodies can be designated as artificial or heavily modified if they meet the criteria set out in Article 4(3). These criteria include the water body being modified by human activity as a result of a current or historical "designated use" that substantially and permanently changes the character of the water body. Designated uses include navigation, water storage, water regulation, flood defence and land drainage.
<b>Deterioration (of water body status)</b>	It is a requirement of the Water Framework Directive that none of the quality elements used in the classification of water body status deteriorates from one status class to a lower one. This is referred to as 'preventing deterioration' throughout the river basin management plans.
<b>Diffuse pollution</b>	Pollution from widespread activities with no one discrete source, e.g. pesticides, urban run-off etc. Pollution resulting from scattering or dispersed sources that are collectively significant but to which effects are difficult to attribute individually
<b>Disbenefits</b>	In the context of river basin management planning economic appraisal, a disbenefit is any negative consequence (negative impact, cost, trade-off) which society and/or the environment will bear from implementing measures to improve the water environment.
<b>Disproportionate cost</b>	The determination of disproportionate cost requires a decision making procedure that assesses whether the benefits of meeting good status in a water body are outweighed by the costs.
<b>Disproportionately expensive</b>	Disproportionate expense is a political decision informed by economic information. It is a decision making process that assesses whether the benefits of meeting good status for a water body are outweighed by the costs. Something is considered to be disproportionate where the negative consequences (the costs, negative impacts) outweigh the positive consequences (the benefits) of improvements to the



	water environment. Affordability is also a consideration of disproportionate expense; how much money is available to do things and by when (affordability).
<b>Drinking water inspectorate (DWI)</b>	The Drinking Water Inspectorate was formed in 1990 to provide independent reassurance that public water supplies in England and Wales are safe and drinking water quality is acceptable to consumers
<b>Drinking water protected areas</b>	As defined in article 7 of the Water Framework Directive, any water body from which 'raw' water is abstracted, or will be in the future, for human consumption at a rate of at least 10m <sup>3</sup> /day or serving over 50 people shall be identified as a drinking water protected area (DrWPA)
<b>Ecological potential</b>	The status of a heavily modified or artificial water body measured against the maximum ecological quality it could achieve given the constraints imposed upon it by those heavily modified or artificial characteristics necessary for its use. There are 5 ecological potential classes for heavily modified water bodies and artificial water bodies (maximum, good, moderate, poor and bad).
<b>Ecological recovery time</b>	The time it takes the ecology of a system to recover once the pressures impacting that system have been removed.
<b>Ecological status</b>	Ecological status applies to surface water bodies and is based on the following quality elements: biological quality, general chemical and physico-chemical quality, water quality with respect to specific pollutants (synthetic and non-synthetic), and hydromorphological quality. There are 5 classes of ecological status (high, good, moderate, poor or bad). Ecological status and chemical status together define the overall surface water status of a water body.
<b>Economically significant species (shellfish waters)</b>	Areas where water quality is protected and improved to support the growth of healthy shellfish (bivalve and gastropod molluscs) and contribute to good quality edible shellfish. (Also see 'protected areas').
<b>Economic analysis</b>	An economic analysis was produced as part of the consultation on the draft update to the river basin management plans. This was to help readers understand the potential implications to 4 sector groupings of 5 future management scenarios. Information on costs and benefits is summarised for England and for each river basin district.
<b>Economic appraisal</b>	Appraisals to assess the benefits and cost (negative impacts) of implementing measures to improve the water environment.
<b>Ecosystem approach</b>	The ecosystem approach is a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way. It is a way of looking at the natural environment that allows the value of the natural environment to be taken in to account during environmental decision making.
<b>Ecosystem services</b>	The services that people receive from nature; a service that the natural environment provides that improves people's quality of life. Ecosystem services can be tangible such as increased fish populations for fishing, improved water availability during drought or more subtle such as pollination of crops and natural flood regulation.

<b>Environmental quality standard</b>	A concentration of a pollutant or group of pollutants in water, sediment or biota which should not be exceeded in order to protect human health and the environment.
<b>Environmental Quality Standards Directive</b>	Directive (2008/2015/EC amended by 2013/39/EU) outlining requirements for priority substances and priority hazardous substances. A daughter directive of the Water Framework Directive.
<b>Eel management plans</b>	Plans required under EU Regulation No. 1100/2007 whereby EU member states, where eels naturally occur, have to produce eel management plans aimed at reversing the decline in eel numbers. The target is to achieve migration to sea of at least 40% of historic silver eel biomass levels.
<b>Estuarine/estuaries</b>	Waters that are intermediate between fresh and marine water (see also 'transitional').
<b>Eutrophication</b>	The enrichment of waters by nutrients, especially compounds of nitrogen and/or phosphorus, causing an accelerated growth of algae and higher forms of plant life, producing an undesirable disturbance to the balance of organisms present in the water and the quality of the water concerned.
<b>Exemption</b>	An exemption is an instance where the default objective (e.g. aim to achieve good ecological status by 2021) of the Water Framework Directive is deviated from in certain and specific circumstances as set out in Article 4.4 and 4.5 of the Water Framework Directive. In these circumstances an alternative objective can be set. This could be an extended deadline, a less stringent objective or both.
<b>Extended deadline</b>	Under certain circumstances, and subject to the detailed conditions in Article 4.4, the Water Framework Directive allows the deadline for achieving objectives to be extended. 'Extended deadlines' can apply to water bodies where achievement of Directive objectives by an earlier date would be technically infeasible or disproportionately expensive or not possible because of natural recovery time.
<b>Floods Directive</b>	The purpose of the European Union Directive on flooding (2007/60/EC) is to establish a framework for the assessment and management of flood risks aiming at the reduction of the adverse consequences on human health, the environment, cultural heritage and economic activity associated with floods in the community. It requires member states to undertake flood risk assessments, flood risk mapping and produce flood risk management plans.
<b>Flood risk management plans</b>	<a href="#">Flood Risk Management Plans</a> (FRMPs) highlight the hazards and risks of flooding from rivers, the sea, surface water, groundwater and reservoirs, and set out how risk management authorities work together with communities to manage flood risk.
<b>Freshwater fish Directive</b>	The Freshwater Fish Directive was adopted in 1978 and was repealed in 2013 by the Water Framework Directive. For more details see Part 2.
<b>Good chemical status</b>	See 'chemical status'
<b>Good ecological</b>	Those surface waters which are identified as heavily modified water

<b>potential</b>	bodies and artificial water bodies must aim to achieve 'good ecological potential' (good potential is a recognition that changes to morphology may make good ecological status very difficult to meet).
<b>Good ecological status</b>	See 'ecological status'
<b>Good status</b>	A surface water body is at good status overall when both ecological status and chemical status are at least good.  A groundwater body is at good status overall when both chemical status and quantitative status are good. .
<b>Groundwater</b>	All water which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil.
<b>Groundwater chemical status</b>	Groundwater chemical status is an expression of the overall quality of the groundwater body based on five tests and takes into consideration defined threshold values and trends.
<b>Groundwater Directive</b>	Directive (2006/118/EC amended by 2014/80/EU) on the protection of groundwater against pollution and deterioration. A daughter directive of the Water Framework Directive.
<b>Groundwater quantitative status</b>	Groundwater quantitative status is an expression of the overall impact that groundwater abstraction has on the groundwater body and dependent ecosystems. It is based on four tests
<b>Habitat action plans</b>	See 'Biodiversity action plans'
<b>Habitats and Birds directives</b>	The Habitats and Wild Bird Directives are European legislation that protect certain species and habitats in the European Union. See 'protected areas'
<b>Hazardous Substances (groundwater)</b>	A hazardous substance is any substance or group of substances that are toxic, persistent and liable to bio-accumulate. The Joint Agencies Groundwater Directive Advisory Group (JAGDAG) provide a mechanism for making UK wide determinations and compile a UK list of hazardous substances.
<b>Heavily modified water body</b>	A surface water body that does not achieve good ecological status because of substantial changes to its physical characteristics resulting from physical alterations caused by human use and which has been designated, in accordance with criteria specified in the Water Framework Directive, as 'heavily modified'.
<b>High ecological status</b>	Is a state, in a surface water body, where the values of the hydromorphological, physico-chemical, and biological quality elements correspond to conditions undisturbed by anthropogenic activities.
<b>Hydromorphology</b>	Describes the hydrological and geomorphological processes and attributes of surface water bodies. For example for rivers, hydromorphology describes the form and function of the channel as well as its connectivity (up and downstream and with groundwater) and flow regime, which defines its ability to allow migration of aquatic organisms and maintain natural continuity of sediment transport through the fluvial system. The Water Framework Directive requires surface waters to be managed in such a way as to safeguard their

	hydrology and geomorphology so that ecology is protected.
<b>Impact assessment</b>	The statutory guidance to the Environment Agency on river basin management planning requires a final Impact Assessment to be prepared alongside the updated river basin management plans. The Impact Assessment examined the costs, benefits and distributional impacts that could result from Ministerial decisions to approve the updated river basin management plans.
<b>Inshore fisheries and conservation authorities</b>	As a result of the Marine and Coastal Access Act 2009, Inshore Fisheries and Conservation Authorities replaced Sea Fisheries Committees and have strengthened powers to tackle fishing practices that cause unacceptable damage to the wider marine environment.
<b>Invasive non-native species</b>	Many species of plants and animals have been introduced to this country. Several of these non-native species are invasive and have been causing serious problems to the aquatic and riverine ecology and environment. Problems include detrimental effects on native species, deoxygenation of water causing fish mortalities, blocking of rivers and drainage channels, predation and competition with native species, and, in some cases, pose health risks to the public or livestock.
<b>Inventory of emissions, discharges and losses</b>	An inventory relating to priority and priority hazardous substances required by Article 5 of the Environmental Quality Standards Directive. The inventory will, amongst other things, help identify the main sources of these substances in the environment and assist in checking the effectiveness of measures implemented to achieve the reduction and phasing out of emissions required by the provisions of the Water Framework Directive.
<b>Less stringent objectives</b>	Under certain circumstances, and subject to the detailed conditions in Article 4.5, the Water Framework Directive allows for the setting of objectives that give a lower standard of environmental protection. 'Less stringent objectives' can apply to water bodies where the achievement of Directive objectives would be technically infeasible, disproportionately expensive or because of natural conditions.
<b>Local development frameworks and plans</b>	Under the Planning and Compulsory Purchase Act 2004, local plans and unitary development plans in England were replaced by Local Development Frameworks. These are made up of a number of statutory and non-statutory local development documents. In Wales, they are called Local Development Plans.
<b>Macroalgae</b>	Multicellular algae such as seaweed.
<b>Macrophyte</b>	Larger plants, typically including flowering plants, mosses and larger algae but not including single-celled phytoplankton or diatoms.
<b>Management catchment</b>	An amalgamation of a number of river water body catchments that provide a management unit at which level some actions are applied.

<b>Marine Conservation Zone</b>	Under the Marine and Coastal Access Act 2009, <a href="#">Marine Conservation Zones</a> conserve the diversity of nationally rare, threatened and representative habitats and species
<b>Marine Management Organisation (MMO)</b>	Created by the Marine and Coastal Access Act 2009, the <a href="#">Marine Management Organisation</a> license, regulate and plan activities in English seas so that they're carried out in a sustainable way.
<b>Marine Policy Statement</b>	The Marine Policy Statement (MPS) is the framework for preparing Marine Plans and taking decisions affecting the marine environment.
<b>Marine Strategy Framework Directive</b>	The European Union <a href="#">Marine Strategy Framework Directive</a> provides a framework to allow co-ordinated action across Europe to achieve good environmental status in marine waters by 2020. It provides the tools to achieve clean, healthy, productive and biologically diverse oceans and seas,
<b>Measure</b>	This term used in the Water Framework Directive means an action which will be taken on the ground to help achieve Water Framework Directive objectives.
<b>Mechanisms</b>	The policy, legal and financial tools which are used to bring about measures. Mechanisms include for example: legislation, economic instruments, codes of good practice, negotiated agreements, promotion of water efficiency, educational projects, research, development and demonstration projects.
<b>Mitigation measures</b>	Mitigation measures are measures applied in artificial and heavily modified water bodies to mitigate against the impact of the physical modifications to allow the water body to achieve good ecological potential (GEP). If any mitigation measures are missing from an artificial or heavily modified water body it can only achieve moderate GEP.
<b>Monetised benefits</b>	<p>See 'benefits'.</p> <p>Benefits can be quantified in financial terms using different economic valuation techniques. The reason that (some) benefits need to be quantified in monetary terms is in order to compare like with like (costs in £ with benefits in £). In addition to recreational services and existence and aesthetic values, the ecosystem services (see 'Ecosystem Services') provided by wetland creation are also monetised in the catchment economic appraisals that the Environment Agency has carried out.</p> <p>The Environment Agency is using economic tools and studies to understand how much people value a change in the non-market benefits that the water environment provides. The method the Environment Agency has used to monetise benefits in catchment economic appraisals is based on the use of surveys asking people to state how much they would be willing to pay for an improvement in the water environment (locally and nationally). See 'willingness to pay (values)' and 'national water environment benefits survey'.</p>
<b>Morphology</b>	Describes the physical form and condition of a water body, for example the width, depth and perimeter of a river channel, the structure and condition of the riverbed and bank.



<b>National water environment benefits survey</b>	<p>Assessed public values for improvement to six components of a healthy water environment: fish, plants, invertebrates and other animals, clarity of the water, flow and condition of the channel, and safety of the water for recreational contact. A sample of 1,500 people were interviewed to find out what was the most they would be willing to pay for an improvement in the quality of the water environment, both locally and nationally. The result was a set of figures known as 'Willingness to Pay' values (see 'Willingness to pay'). These figures reflect the value that people attach to improvements in recreation and aesthetic benefits from the water environment, as well as the value they place on it existing, even if they don't directly use it.</p> <p>Reference: P.Metcalf (2012). Non-market valuation using stated preferences: Applications in the water sector, Thesis submitted to the Dept. of Geography and Environment, the London School of Economics &amp; Political Science.</p>
<b>Natural Resources Wales (NRW)</b>	Welsh Government sponsored body whose purpose is to ensure that the natural resources of Wales are sustainably maintained, enhanced and used, now and in the future. Natural Resources Wales lead on the West Wales and Dee river basin management plans.
<b>Natura 2000 sites</b>	Protected areas established for the protection of habitats or species under the Birds Directive (2009/147/EC) (Special Protection Areas) and the Habitats Directive (92/43/EEC) (Special Areas of Conservation).
<b>Natural England</b>	The government-funded body whose purpose is to promote the conservation of England's wildlife and natural features. The previously existing organisations English Nature, the Countryside Agency and Rural Development Service were merged to form Natural England.
<b>Net present value</b>	Net present value is the present value benefits minus the present value costs (see 'Present value costs/benefits').
<b>Nitrates Directive</b>	A basic measure under the Water Framework Directive, the Nitrates Directive aims to protect water quality by preventing nitrates from agricultural sources polluting ground and surface waters and by promoting the use of good farming practices.
<b>Nitrate Vulnerable Zones (NVZ)</b>	A Nitrate Vulnerable Zone (NVZ) is designated where land drains and contributes to the nitrate found in "polluted" waters
<b>Non-monetised benefits</b>	Improving the water environment has wider benefits than those the Environment Agency has monetised in economic appraisals (see 'monetised benefits'). These have been identified using ecosystem services (see 'ecosystem services'). The impacts on ecosystem services may be positive or negative and be more or less significant. These impacts, although not monetised in an appraisal, are taken account of when assessing the overall positive and negative consequences of implementing measures to improve the water environment.
<b>Nutrient sensitive areas</b>	Includes Nitrate Vulnerable Zones under the Nitrates Directive (91/676/EEC) and Sensitive Areas involving eutrophication or elevated nitrates under the Urban Waste Water Treatment Directive (91/271/EEC). See 'protected areas'.

<b>Objective</b>	See 'status objective'
<b>Operational catchment</b>	An amalgamation of a small number of river water body catchments. Operational catchments are generally smaller than management catchments. They are used in the economic analysis process to group packages of measures.
<b>Phytobenthos</b>	Bottom-dwelling multi-cellular and unicellular aquatic plants such as some species of diatom.
<b>Phytoplankton</b>	Unicellular algae and cyanobacteria, both solitary and colonial that live, at least for part of their lifecycle, in the water column.
<b>Point source pollution</b>	Pollution arising from an identifiable and discrete source such as a discharge pipe.
<b>Pollution</b>	The direct or indirect introduction, as a result of human activity, of substances or heat into the air, water or land which: (i) may be harmful to human health or the quality of aquatic ecosystems or terrestrial ecosystems directly depending on aquatic ecosystems; (ii) result in damage to material property; or (iii) impair or interfere with amenities and other legitimate uses of the environment.
<b>Predicted outcome</b>	The predicted future status of a quality element or water body based on groups of practical and justified measures and the date when this status will be achieved. Predicted outcomes are used in the derivation of objectives.
<b>Present value costs/benefits</b>	A way of expressing the value of costs and benefits that will happen in the future in today's money. People tend to value future costs and benefits differently to benefits and costs occurring in the present. A technique known as 'discounting' takes this into account and expresses what a future impact is worth now.
<b>Pressures</b>	Human activities such as abstraction, effluent discharges or engineering works that have the potential to have adverse effects on the water environment.
<b>Prevent and limit</b>	To enact requirements of the Water Framework Directive on the protection of groundwater against pollution and deterioration, all necessary and reasonable measures must be taken to prevent the entry of hazardous substances to groundwater and limit the input of non-hazardous substances to avoid pollution.
<b>Price review (PR)</b>	This is the process, carried out every five years by the Water Services Regulation Authority, to assess the water company business plans including spending and investment. The plans include environmental improvements. The process is to ensure that water companies provide a good quality service and value for money for their customers. The outcome affects customers' water bill charges. During implementation period of the business plan it is often known as an asset management plan.
<b>Priority substances</b>	A pollutant, or group of pollutants, presenting a significant risk to or via the aquatic environment that has been identified at Community level under Article 16 of the Water Framework Directive. They include 'priority hazardous substances'. For groundwater, see 'Hazardous

	substances’.
<b>Programme of measures (PoMs)</b>	A programme of measures, as used in the Water Framework Directive, is a summary of the actions designed to improve the environment in a river basin district and meet the objectives of the Directive.
<b>Protected areas</b>	Areas that have been designated as requiring special protection under EU legislation for the protection of their surface water and groundwater or for the protection of habitats and species directly depending on water. Part 2 contains more detail on the protected areas
<b>Quality element</b>	A feature of an aquatic ecosystem that can be described as a number for the purposes of calculating an ecological quality ratio, such as the concentration of a pollutant or the number of species of a type of plant.
<b>Ramsar site</b>	A wetland area designated for its conservation value under the 1971 Convention on Wetlands of International Importance, especially as Waterfowl Habitat. The Ramsar Convention seeks to promote the conservation of listed wetlands and their wise use.
<b>Reason for not achieving good status</b>	Records the source, activity and sector involved in causing an element to be at less than good status. Previously known as a reason for failure.
<b>Reference conditions</b>	The benchmark against which the effects on surface water ecosystems of human activities can be measured and reported in the relevant classification scheme. For waters not designated as heavily modified or artificial, the reference conditions are synonymous with the high ecological status class. For waters designated as heavily modified or artificial, they are synonymous with the maximum ecological potential class.
<b>Risk</b>	The likelihood of an outcome (usually negative) to a water body or the environment, or the potential impact of a pressure on a water body.
<b>Risk assessment</b>	The analysis that predicts the likelihood that a water body is at significant risk of failing to achieve one or more of the Water Framework Directive objectives.
<b>Risk category</b>	The numerical or descriptive category assigned to water bodies that have been risk assessed, in order to make the risk-based prioritisation of water bodies for action under the Water Framework Directive more manageable.
<b>River basin</b>	A river basin is the area of land from which all surface run-off and spring water flows through a sequence of streams, lakes and rivers into the sea at a single river mouth, estuary or delta. It comprises one or more individual catchments.
<b>River basin district</b>	A river basin or several river basins, together with associated coastal waters. A river basin district is the main unit for management of river basins under the Water Framework Directive.
<b>River basin district liaison panels</b>	A panel consisting of up to 15 representatives of strategic co-deliverers including bodies with statutory powers and others who will

	need to put measures into action for the river basin district. The panel represents all key interests within the river basin district and is the primary focus for engagement at the river basin district level.
<b>River basin management planning</b>	The management and associated planning process that underpins implementation and operation of the Water Framework Directive. It is both an overarching process in terms of existing processes and also defines new sub-processes such as those for hydromorphology. The river basin management plans are plans for river basin management.
<b>River basin management plan</b>	For each river basin district, the Water Framework Directive requires a river basin management plan to be published. These are plans that set out the environmental objectives for all the water bodies within the river basin district and a summary of the programme of measures that will be taken to achieve those objectives. The plans are based upon a detailed analysis of the pressures on the water bodies and an assessment of their impacts. The plans must be reviewed and updated every six years.
<b>Rural development programme</b>	The England Rural Development Programme and the Rural Development Plan for Wales are schemes in the government's Public Incentive Programme. These programmes are of major significance for rural land management as they provide substantial funding to land managers conditional on the implementation of environmental (and other) actions.
<b>Safeguard zones</b>	Drinking water safeguard zones (SgZs) are areas where additional measures are needed to reduce the risk of deterioration in raw water (e.g. rivers, reservoirs, groundwater) where that water is intended for human consumption.
<b>Saturated zone</b>	Subsurface rock or other geological strata within which the pore spaces between the particles of rock or other strata, and the cracks in those strata are filled with water.
<b>Shellfish Waters</b>	See 'Economically significant species'
<b>Shellfish Waters Directive</b>	The Shellfish Waters Directive was repealed in 2013 by the Water Framework Directive.
<b>Significant adverse impact on use (SAIOU)</b>	Used in artificial and heavily modified water bodies, a SAIOU is a reason for not implementing a measure to mitigate the impact of a physical modification associated with a designated use of that water body.
<b>Site of special scientific interest (SSSIs)</b>	An area of land notified under the Wildlife and Countryside Act 1981 by the appropriate nature conservation body as being of special interest by virtue of its flora and fauna, geological or physiogeographical features.
<b>Spatial planning</b>	Spatial planning is wider ranging than land-use planning based on regulation and control of land, and aims to ensure the best use of land by assessing competing demands. Social, economic and environmental factors are taken into account in producing a decision that is more conducive to sustainable development.

<b>Special area of conservation (SAC)</b>	A category of Natura 2000 site that is designated under the Habitats Directive. See 'protected areas'.
<b>Special protection area (SPA)</b>	A category of Natura 2000 site that is designated under the Birds Directive. See 'protected areas'.
<b>Specific pollutant</b>	Substance identified as a potential pollutant by a member state. These substances and associated environmental quality standards are proposed in the UK by the UKTAG and introduced into legislation by government.
<b>Stakeholder</b>	Individuals or groups that are or could become interested in, involved in or affected by Environment Agency policies and activities. The Environment Agency's stakeholders include regulators, statutory bodies, professional organisations, local organisations and members of the public.
<b>Status objective</b>	<p>Water body objectives consist of two pieces of information: the status (such as 'good') and the date by which that status is planned to be achieved (for example, 'by 2021').</p> <p>The status part of an objective is based on a prediction of the future status that would be achieved if technically feasible measures are implemented and, when implemented, would give rise to more benefits than they cost. The objective also takes into account the requirement to prevent deterioration and, as far as practicable, the requirements of protected areas.</p> <p>The date part of an objective is the year by which the future status is predicted to be achieved. The date is determined by considering whether the measures needed to achieve the planned status are currently affordable and, once implemented, the time taken for ecology or the groundwater to recover.</p>
<b>Strategic environmental assessment directive (2001/42/EC)</b>	European environmental legislation which requires an 'environmental assessment' to be carried out for certain plans and programmes whose formal preparation began after 21 July 2004 (or are prepared but not adopted or submitted by a legislative procedure by 21 July 2006), and which are considered likely to have significant effects on the environment. The term "Strategic Environmental Assessment" is used in United Kingdom guidance to mean an environmental assessment under this Directive.
<b>Summary of significant water management issues</b>	This is the name of the consultation in 2007 on a report for each river basin district which highlighted significant water management issues in that river basin district which will need to be addressed to achieve environmental objectives under the Water Framework Directive. The 2013 updated consultation was renamed 'Challenges and choices'.
<b>Surface waters</b>	Generally refers to water bodies above the ground including rivers, lakes, estuaries and coastal waters (i.e. not including groundwater)
<b>Sustainable drainage systems</b>	A system of management practices and control structures designed to drain surface water in a more sustainable fashion than some conventional techniques.



<b>Technical feasibility</b>	<p>Technical feasibility is determined through the assessment of whether the implementation of a measure or programme of measures, designed to achieve the Water Framework Directive objectives, is technically possible either at the national or local level and includes the consideration of uncertainty as well as environmental and socio-economic feasibility.</p> <p>Technical feasibility depends upon the availability of a technical solution and information on the cause of the problem and hence the identification of the solution.</p>
<b>Transitional water</b>	A Water Framework Directive term for bodies of surface water in the vicinity of river mouths which are partly saline in character as a result of their proximity to coastal waters but are substantially influenced by freshwater flows. Transitional waters include estuaries and saline lagoons.
<b>Typology</b>	The means by which the Water Framework Directive requires surface water bodies to be differentiated according to their physical and physico-chemical characteristics.
<b>uPBT (ubiquitous persistent, bioaccumulative and toxic substances)</b>	A subset of priority substances (uPBTs) that have been identified under the amended Environmental Quality Standards Directive (2013/39/EU).
<b>Urban Waste Water Treatment Directive (91/271/EEC)</b>	European Directive 91/271/EEC. A basic measure under the Water framework directive which lays down minimum standards for the provision of sewerage systems and sewage treatment. Its objective is to protect the environment from the adverse effects of urban waste water discharges and waste water discharges from certain industrial sectors.
<b>Water body</b>	A unit of surface water, being the whole (or part) of a stream, river or canal, lake or reservoir, estuary or stretch of coastal water. A groundwater water body is a defined area of an aquifer with geological and hydrological boundaries to ensure consistency and avoid fragmentation
<b>Water Framework Directive (Water Framework Directive)</b>	European Union legislation, Water Framework Directive (2000/60/EC) establishing a framework for European Community action in the field of water policy.
<b>Water Framework Directive objectives</b>	For a summary of the environmental objectives of the Water Framework Directive see section 3.1 of part 2 of the updated river basin management plans. The objectives are set out in Article 4 and Article 7 (paras 2 and 3) of the Water Framework Directive. See also 'status objective'.
<b>Water level management plans</b>	Water level management plans provide a means by which water level requirements for a range of activities including agriculture, flood defence and conservation can be balanced and integrated.
<b>Water protection zones</b>	Areas designated by the Secretary of State, within which activities polluting or harming the water environment can be restricted or prohibited or controlled. Water Protection Zones can be designated at any scale (sub-catchment, catchment or a larger area) and

	prohibitions, restrictions or requirements are imposed to combat point and/or diffuse sources of water pollution and harm being caused to waters.
<b>Water services</b>	All services which provide, for households, public institutions or any economic activity.
<b>Water Services Regulation Authority</b>	The economic regulator for the water and sewerage sectors in England and Wales. Commonly known as Ofwat and previously called Office of Water Services. Renamed the Water Services Regulation Authority.
<b>Water table</b>	For groundwater, the upper limit of the saturation zone.
<b>Water use</b>	Water Services together with any other human activity identified as having a significant impact upon the status of water.
<b>Weight of evidence</b>	A weight of evidence approach integrates results or evidence from several data sources, weighted appropriately, to make risk based decisions.
<b>Welsh Government</b>	The devolved government in Wales.
<b>WFD favourable</b>	Water Framework Directive (WFD) favourable is a term applied in the classification of the water dependent SSSI units used to assess the condition of Natura 2000 protected areas, and used for river basin management planning purposes only. i.e. 'Water Framework Directive favourable' only applies to water dependent features and does not necessarily mean that the SSSI unit/s overall are in "favourable condition"
<b>Willingness to pay (value)</b>	The value (in £) society is willing to pay for the continued provision of a good or service or for a change in the good or service. In the context of river basin management planning economic appraisal, this is an environmental good or service. The willingness to pay values the Environment Agency has used in catchment economic appraisals are derived from the National Water Environment Benefits Survey (see 'National Water Environment Benefits Survey').

## 4. Abbreviations

Abbreviation	Meaning
<b>A/HMWB</b>	Artificial or Heavily Modified Water Body
<b>AMP</b>	Asset management plan
<b>AWB</b>	Artificial water body
<b>BAP</b>	Biodiversity action plan
<b>BFP</b>	Basic farm payment
<b>BFRs</b>	Brominated flame retardants.
<b>BGS</b>	British Geological Survey
<b>BOD</b>	Biochemical oxygen demand
<b>BPA</b>	British Ports Association
<b>BWD</b>	Bathing Water Directive
<b>CAMS</b>	Catchment abstraction management strategy
<b>CaBA</b>	Catchment based approach
<b>CAP</b>	Common agricultural policy
<b>CCRA</b>	UK climate change risk assessment
<b>CDE</b>	Catchment data explorer
<b>CEA</b>	Cost effective analysis
<b>CEFAS</b>	Centre for the Environment, Fisheries and Aquaculture Science
<b>CIP</b>	Chemicals investigation programme
<b>CIS</b>	Common implementation strategy
<b>CLA</b>	Country Land and Business Association
<b>CSFO</b>	Catchment sensitive farming officers
<b>CSO</b>	Combined sewer outflow
<b>CSMG</b>	Common standards monitoring guidance
<b>CSPs</b>	Community strategic partnerships
<b>DECC</b>	Department of Energy and Climate Change
<b>DCLG</b>	Department of Communities and Local Government
<b>Defra</b>	Department for Environment, Food and Rural Affairs
<b>DrWPA</b>	Drinking water protected area
<b>E&amp;C</b>	Estuaries and coasts
<b>EASG</b>	Economic Advisory Stakeholder Group
<b>EC</b>	European Community/Commission
<b>EIUC</b>	Environmental improvement unit charge

<b>EQSD</b>	Environment quality standards directive
<b>EQS</b>	Environmental quality standard
<b>EU</b>	European Union
<b>FAPs</b>	Fisheries action plans
<b>FD</b>	Floods directive
<b>FRAs</b>	Flood risk assessments
<b>FRMPs</b>	Flood risk management plans
<b>FRS</b>	Fisheries Research Services
<b>GAEC</b>	Good agricultural and environmental conditions
<b>GEP</b>	Good ecological potential
<b>GQA</b>	General quality assessment
<b>HMWB</b>	Heavily modified water bodies
<b>IA</b>	Impact assessment (formerly regulatory impact assessment)
<b>ICZM</b>	Integrated coastal zone management
<b>INNS</b>	Invasive non-native species
<b>IPENS</b>	Improvement programme for England's Natura 2000 sites
<b>IRBCM</b>	Integrated river basin catchment management
<b>JNCC</b>	Joint Nature Conservation Committee
<b>LDF</b>	Local development framework
<b>LDP</b>	Local development plan
<b>LEAP</b>	Local environment action plan
<b>LEPs</b>	Local enterprise partnerships
<b>LLFAs</b>	Local lead flood authorities
<b>LPO</b>	Local planning authority
<b>LSPs</b>	Local strategic partnerships
<b>LWEC</b>	Living with environmental change
<b>MCZ</b>	Marine conservation zone
<b>MMO</b>	Marine Management Organisation
<b>MPMMG</b>	Marine Pollution Monitoring Management Group
<b>MPS</b>	Marine policy statement
<b>MSFD</b>	Marine Strategy Framework Directive
<b>NAP</b>	National adaptation programme
<b>N2K</b>	Natura 2000
<b>NBB</b>	New building blocks
<b>NEP</b>	National environment programme
<b>NFU</b>	National Farmers' Union

<b>NGO</b>	Non-governmental organisation
<b>NLPE</b>	National Liaison Panel for England
<b>NMMP</b>	National marine monitoring plan
<b>NMP</b>	National marine programme
<b>NRW</b>	Natural Resources Wales
<b>NVZs</b>	Nitrate vulnerable zones
<b>OBB</b>	Old building blocks
<b>ODPM</b>	Office of the Deputy Prime Minister
<b>Ofwat</b>	The Water Services Regulation Authority (previously known as the Office of Water Services)
<b>OSPAR</b>	Oslo and Paris Convention
<b>PAHs</b>	Polycyclic aromatic hydrocarbons
<b>PPS</b>	Planning policy statement
<b>PoMs</b>	Programme of measures
<b>PR09</b>	Periodic review in 2009
<b>PR14</b>	Periodic review in 2014
<b>PSA</b>	Public service agreement
<b>RBC</b>	River basin characterisation
<b>RBD</b>	River basin district
<b>RBMP</b>	River basin management plan
<b>RDR</b>	Rural development regulation
<b>RDS</b>	Rural development service
<b>REACH</b>	Registration, evaluation, authorisation and restriction of chemicals.
<b>RIA</b>	Regulatory impact assessment
<b>RQO</b>	River quality objective
<b>RRDF</b>	Regional rural development framework
<b>RSA</b>	Restoring sustainable abstraction
<b>RSPB</b>	Royal Society for the Protection of Birds
<b>RSS</b>	Regional spatial strategies
<b>SAC</b>	Special area of conservation
<b>SAPs</b>	Salmon action plans
<b>SEA</b>	Strategic environmental assessment
<b>SEAD</b>	Strategic environmental assessment directive
<b>SEPA</b>	Scottish Environment Protection Agency
<b>SFP</b>	Single farm payment
<b>SMP</b>	Shoreline management plan



<b>SMR</b>	Statutory management requirements
<b>SNH</b>	Scottish Natural Heritage
<b>SNIFFER</b>	Scotland and Northern Ireland Forum for Environmental Research
<b>SoP</b>	Statement of particulars
<b>SoS</b>	Secretary of state
<b>SPA</b>	Special protection area
<b>SSSI</b>	Site of special scientific interest
<b>SSWMI</b>	Summary of significant water management issues
<b>SUDS</b>	Sustainable drainage systems
<b>TANs</b>	Technical advice notes
<b>TBT</b>	Tributyltin
<b>TRaC</b>	Estuarine and coastal water bodies
<b>UKCIP</b>	United kingdom climate impacts programme
<b>UKMPG</b>	United Kingdom Major Ports Group
<b>UKTAG</b>	United Kingdom Technical Advisory Group
<b>UKWIR</b>	United Kingdom Water Industry Research
<b>UWWTD</b>	Urban Waste Water Treatment Directive
<b>WG/(WAG)</b>	Welsh government
<b>Water Framework Directive</b>	Water Framework Directive
<b>WLMPs</b>	Water level management plans
<b>WPZs</b>	Water protection zones

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